CLAIMS

1. Machine-readable coded data disposed on or in a substrate in accordance with a layout, the layout having six-fold rotational symmetry, the layout including six identical sub-layouts rotated 1/6 revolutions apart about a center of rotational symmetry of the layout, the coded data disposed in accordance with each sub-layout including rotation-indicating data that distinguishes the rotation of that sub-layout from the rotation of at least one other sub-layout within the layout.

2. Machine-readable coded data according to claim 1, wherein the rotation-indicating data distinguishes the rotation of the sub-layout from the rotation of each of the other sub-layouts within the layout.

3. Machine-readable coded data according to claim 1 or claim 2, wherein the coded data is redundantly encoded and the coded data of each sub-layout includes at least one coded data codeword.

4. Machine-readable coded data according to claim 3, wherein the coded data is redundantly encoded using a Reed-Solomon encoding.

5. Machine-readable coded data according to claim 1, wherein each sub-layout defines a plurality of positions of data elements, the sub-layouts being interleaved with each other without any two data elements overlapping each other.

6. Machine-readable coded data according to claim 1, wherein the layout is repeated on the substrate.

7. Machine-readable coded data according to claim 6, wherein the layouts are packed together on the substrate.

8. Machine-readable coded data according to claim 1, wherein the layout is hexagonal.

10. Machine-readable coded data according to claim 1, including one or more target features for enabling preliminary location and rotation of the layout to be determined by a machine used to read the coded data.

11.   Machine-readable coded data according to claim 10, wherein the target features are configured to enable perspective correction of the coded data of the, or each, layout upon reading by the machine.

12.   Machine-readable coded data according to claim 11, including at least four of the target features.

13.   Machine-readable coded data according to any one of claims 9 to 11, including a plurality of the layouts, wherein at least some of the target features are shared by at least two of the layouts.

14.   Machine-readable coded data according to claim 1, the coded data being printed onto the substrate.

15.   Machine-readable coded data according to claim 14, wherein the coded data is printed onto the surface in ink that is of low-visibility or is invisible to an average unaided human eye.

16.   Machine-readable coded data according to claim 15, wherein the ink is an infrared ink that is substantially invisible to an average unaided human eye.

17.   Machine-readable coded data according to claim 1, wherein the coded data of each layout or sub-layout defines user data.

18.   Machine-readable coded data according to claim 17, wherein the user data includes location data indicative of a position of the layout pattern relative to a region of the surface.

19.   Machine-readable coded data according to claim 17, wherein the user data includes identification data identifying a region of the surface within which the layout is disposed.

20.   Machine-readable coded data according to any one of claims 17 to 19, wherein the user data includes function data identifying a function to be performed upon reading of the layout pattern or sub-pattern by the machine.

21.   Machine-readable coded data according to claim 1, wherein at least some

of the coded data is not disposed in the sub-layouts.

22.   A surface bearing machine-readable coded data in accordance with any one of the preceding claims.

23.   A surface according to claim 20, the surface being flat or curved.

24.   A surface according to claim 22, further including visible markings.

25.   A surface according to claim 24, wherein the visible markings include any one or more of the following:

        text;

        graphics;

        images;

        forms;

        fields; and

        buttons.

26.   A surface according to claim 24, wherein the visible marking are disposed adjacent to, or coincident with, at least some of the coded data.

27.   A surface according to claim 22, the surface being defined by a substrate.

28.   A surface according to claim 27, wherein the substrate is paper, card or another laminar medium.

29.   A surface according to claim 22, configured for use as an interface surface for enabling user interaction with a computer.

30.   A method of generating an interface surface, including the steps of:

        receiving, in a printer, user data;

        generating machine-readable coded data incorporating the user data, in accordance with claim 17; and

        printing the coded data onto a substrate.

31.   A method according to claim 30, further including the step of printing visible markings on the substrate.

32.   A method according to claim 31, wherein the coded data and visible mark-
ings are printed onto the substrate substantially simultaneously.

33.   A method of using a sensing device to read machine-readable coded data
according to any one of claims 1 to 21, the method including the steps of:
(a)   reading, using the sensing device, the coded data of the layout;
(b)   decoding the coded data of at least one of the sub-layouts of the layout,
thereby determining at least the rotation-indicating data of that sub-layout; and
(c)   using the rotation-indicating data to determine a rotational position of at
least one of the remaining sub-layouts to be decoded.

34.   A method according to claim 33, wherein step (a) includes the substeps of:
        imaging the substrate to generate an image thereof;
        processing the image to locate one or more target features of the coded
data; and
        on the basis of the located target features, determining a position of at least
one of the sub-layouts.